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Procedia - Social and Behavioral Sciences 88 (2013) 205 – 211

Procedia Social and Behavioral Sciences

Social and Behavioral Sciences Symposium, 4th International Science, Social Science, Engineering and Energy Conference 2012 (I-SEEC 2012)

# Quality of life and Environment of Communities along Saen Saeb Canal : A survey foundation of the physical and the current situation (Phase I)

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**Abstract**

This research aims to preliminary study on quality of life and environment of the communities along Saen Saeb Canal area by 2 important issues include 1) The environmental quality and 2) The Quality of Life and behavior. The study area is community associated along canal within 500 meters from the center of the canal in present by divided into six themes include 1) Public awareness of environmental protection 2) Environmental water quality 3) Health of the community 4) Economic Community 5) Arts culture Landscape architecture and community 6) The legal quality of life and environment . The result from 6 themes for prepare geographic information system (GIS) database to collect knowledge of communities along Sean Saeb canal and the preliminary knowledge for the study to research and development in phase II.


Selection and/or peer-review under responsibility of Department of Planning and Development, Kasem Bundit University - Bangkok

*Keywords:* Quality of life; Environment; Community

## 1. Introduction

In the past river and canal in Bangkok was important role in the communications, commercial, agricultural and domestic consumption. Communities along the canal occurred. Today the social and economic environment had changed. Urban society expanded from inside to outside. Metropolitan area buildings were concentrated along the canal. Residential and business information sources include the water transportation. Rapid changes made quality

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Selection and/or peer-review under responsibility of Department of Planning and Development, Kasem Bundit University - Bangkok
doi:10.1016/j.sbspro.2013.08.497

of water worse to any canal including Saen Saeb Canal. The rotten state affected to mind and emotions of the spectator and residents along canal. One of the reasons affected the pollution of the water in the canal was that human did not see the importance of water in the canal used in life. The water supply system is accessible in almost every household and people think this was a drainage canal of sewage. The state of pollution of the water in the canal was intense and grew more problem[1]. Although, Several government or agencies were involved in the solution and rehabilitation but also not effective enough. It is a problem that requires cooperation and consistent practice. So,the study is focused on the Bangkok's main canals that connect Mahanak. Khlong Hua Mak, Bangkapi through the canal to the river at Bang province. Flows through the density community and not density community. Both the trade and agricultural fields have differences in the social and cultural environment. This research aimed to study the quality of life and environmental quality along Sean Seab Canel. It had a length of about 72 km. The study area was community associated along canal within 500 meters from the center of the canal. Divided into four areas of study: 1) Inner area of Bangkok : area from the Mahanak canal to Pratoonam Port 2) Middle area of Bangkok : area from the Pratoonam Port to Klong-Tan Port 3) Outer area of Bangkok from Klong-Tan Port to Nong Chok District 4) Chachengsao Province: from edge of Nong Chok District to the Bang-Prakong River in Chachengsao Province. Preliminary study on quality of life and environment of the communities along Saen Saeb Canal area by 2 important issues include 1) The environmental quality and 2) The Quality ofLife and behaviour.

## 2. Purpose of Research

- To study the quality of life and environment of the communities along Sean Saeb Canal at the present by dividing into six themes include 1) Public awareness of environmental protection 2) Environmental water quality 3) Health of the community 4) Economic Community 5) Arts culture Landscape architecture and community 6) The legal quality of life and environment
- Prepare Geographic Information System (GIS) Database to collect knowledge of communities along Sean Saeb Canal

## 3. Conceptual framework

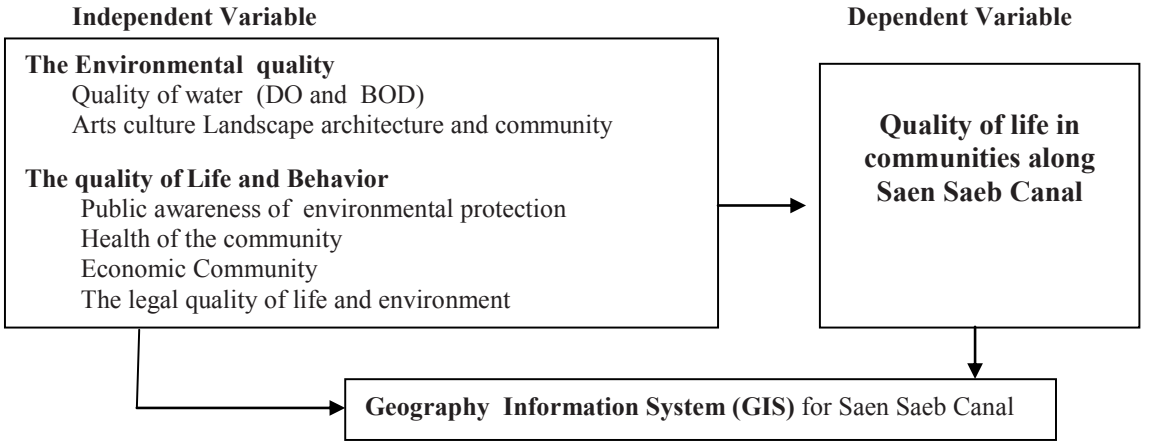


Fig.1: Conceptual framework for study

## 4. Research Methodology

### *4.1 Population*

Communities and households that live along Saen Saeb Canal

### *4.2 Sample*

People and community leaders who live along Saen Saeb Canal between Mahanak. canal to Bang Nam Preaw District, Chachoengsao Province by Multi-stage Sampling

1. Explore the communities along Saen Saeb Canal and divide into 4 areas include
    1) Inner area of Bangkok : area from the Mahanak canal to Pratoonam Port
    2) Middle area of Bangkok : area from the Pratoonam Port to Klong-Tan Port
    3) Outer area of Bangkok from Klong-Tan Port to Nong Chok District
    4) Chachengsao Province: from edge of Nong Chok District to the Bang-Prakong River in Chachengsao Province
2. Quato Sampling to select communities from 4 areas in the same ratio.
3. Purposive sampling to select a community nearest to Saen Saeb Canal each area. Finally, Select 10 communities from Inner area, 12 communities from Middle area,29 communities from Outer area and 6 communities form Chachengsao Province.
4. Collect information from sample Unit by community leaders, headman of village and people who live along Sean Saeb Canal.

## 5. DATA COLLECTION AND INSTRUMENT

### *5.1 Quantities Data collect 2 part*

- The environmental quality
  by collecting water along canal from each 4 areas and tested in laboratory and survey.

- The Quality of Life and behavior
  by questionnaire relate 2 issue include.
    a. Media exposure, knowledge, attitude and behavior of people towards conservation.
    b. Social and economic conditions of the community (household).

The *questionnaire* were constructed using the five-point Likert's scale. Attempts had been made in a quality of life, the development of community and existing documents related to problems found along the Saen Seab canal.

### *5.2 Quality Data collect*

by participanting observation, In-depth interviews and consistency check by Focus Group. The Interview form were constructed relating to information from the public health community center, Bangkok during year 2551-2552, social and economic conditions of the community (household) and constructed using the environment control and quality of life.

## 6. DATA ANALYSIS

### *6.1 The Quality of Life and Behavior Data*

Quantities Data analyze by descriptive statistics and qualitative data analyzed by content analysis in conjunction with SWOT Analysis.

### *6.2 The environmental quality*

Quality water by standard methods for the examination of water [2] and waste water compared with surface quality. The indicator of environment water quality include Dissolved Oxygen: DO, Biochemical oxygen Demand: BO

## 7. RESULTS

The results were presented in 2 parts

- **The Environmental quality**

**Inner area of Bangkok : area from the Mahanak canal to Pratoonam Port**

Community as well as horizontal and vertical density. Water is very dirty, so they can not support the use of water for domestic, agricultural and fishing. Most of the water of a large building, community and industry. In addition, a concrete dam eroded the soil along the canal area. Dissolved oxygen (DO) averaged 0.125±0.103 milligrams per liter which is lower than the standard four surface water types 4. BOD found that mean of all the samples in the range 13.125±8.170 mg per liter which is higher than the standard four surface water types 4. Current use of space for commercial and residential development plan and the land use plan of Bangkok. Aboriginal communities also exist in relation to the capital structure in the past. The relationship with the canal as the main transport and supply of consumer goods. Site planning and architectural character of the community had a unique and worth preserving. They should have a plan to improve the landscape along the canal to the community associated with and linked to the transportation system and without interfering with the way of life in the community.

**Middle area of Bangkok : area from the Pratoonam Port to Klong-Tan Port**

Moderate density community. Water can not support the use of water for domestic, agricultural and fisheries because wastewater was from a large building and community and industry. Concrete dams and soil eroded along the canal. Dissolved oxygen (DO) averaged +0.15 0.075 milligrams per liter which was lower than the standard four surface water types 4. BOD found that mean of all the samples in the range 23±4.69 mg per liter which was higher than the standard four surface water types 4. Mainly Land use for commercial and residential. Large projects that were not related to the canal area . These changes were associated with the growth of the city and the law relating to the construction which affected the size and type of building height, setback a distance from the banks of the canal and open space. The development of this area mus relate with the canal and giving priority to the conservation of architectural importance. They should have a plan to improve the landscape along the canal to the community associated with and linked to the transportation system and without interfering with the way of life in the community.

**Outer area of Bangkok from Klong-Tan Port to Nong Chok District**

Supports the use of water for domestic, agricultural and fisheries. Some areas do not have a concrete embankment along the canal. Dissolved oxygen (DO) averaged 4.48±1.316 milligrams per liter which was lower than the standard four surface water types 4. BOD found that mean of all the samples in the range 23±4.69 mg

per liter which was higher than the standard four surface water types 4. Canal area was agricultural and residential density along the canals and streets because center located at the intersection of roads or canals. This area was under the regulatory control of the building. It did not have large projects that affect the environment but the rapid expansion of urban areas, the housing projects and a shopping mall. The space filled with no systematic study has begun to affect the balance of nature that affected communities along the canal such as decrease in agricultural areas or drainage problems. evelopment in this area. It should focus on improving compliance with the landscape and way of life of the communities along the canal by focusing on the building's historic and natural environment, which can be developed as tourist attractions.

**Chachengsao Province: from edge of Nong Chok District to the Bang-Prakong River in Chachengsao Province**

A shallow canal as a result of soil erosion along the river banks and water hyacinth. Growing building canal encroachment. DO Averaged 6.53 +1.91 mg per liter that higher standard for surface water category 4. BOD found that mean of all the samples in the range. 13.33 +1.154 mg per liter.

- **The Quality of Life and Behavior**

**Inner area of Bangkok : area from the Mahanak canal to Pratoonam Port**

Community was urban community. Community surrounded by high-rise commercial buildings. People had higher education and working people and youth. Sanitation and transportations were covered. They did not take advantage of the canal for consuming but for transport. People live in rush. Effect form canal was foul odor, sound pressure vessel as a result the emotional and psychological. The disease caused by water in canal directly was not found from individual behavior. Receive assistance from the government in all areas continued but community had problems with land tenure rights. Water environment pollution. State warren no empty space. Rate of human moved were high so ties within the community. Strengthening economic and social community were at moderate level. People feel the water canal dirty and rotten and can not use it but can be refreshed. First, Shape awareness that everyone must help each other not to waste water. Most exposure through television, internet and radio. Social Network /Face book. The problems is a sign for publicity campaign to keep clean in a little creek, and the activities did not continue. Public transportation passes (not people who live in community) are not kept clean and the trash is not enough. The campaign must combine with mass media by personal media and activities and motivated by the prizes and certificates for agency or business along canal to preserve environment.

**Middle area of Bangkok : area from the Pratoonam Port to Klong-Tan Port**

Community was combination between Semi-urban, semi-rural community. Community that was surrounded by high-rise commercial buildings. People had higher education and working people and youth. Sanitation and transportations coverage and not found the disease caused by water in canal directly but from individual behavior. Receive assistance from the government in all areas continued but community had problems with land tenure rights. Water environment pollution. State warren no empty space. Rate of human moved were high so, ties within the community. Strengthening economic and social community are a moderate level. Most exposure through television, internet and radio. Social Network /Face book and opinion leader are key for preserve.

**Outer area of Bangkok from Klong-Tan Port to Nong Chok District**

Density of large buildings began to diminish. Use water to fish and agriculture but not consume. Sanitation coverage and not found the disease caused by water in canal directly but from individual behavior. Relatively intact natural environment. The right to own their own land and Community harmony. There is a problem with the income of the people in the community that is unstable. Leader of community is significant for all activities.

Most exposure through radio and leader. Remark, the teachings of Islam are part of the youth and community awareness.

**Chachengsao Province: from edge of Nong Chok District to the Bang-Prakong River in Chachengsao Province**

Most of the area was farmland and household not density. Water use for agriculture was the main canal. Sanitation and water supply to every household were not covered. The disease caused by water in canal directly from individual behavior. Relatively intact natural environment. The right to own their own land and Community harmony. There is a problem with the income of the people in the community that is unstable. The transportation is not convenient. Remark, this zone was a natural state of the water but tended to waste in the future because the household disposal to canal and any factory plant wastewater to canal too as well as pesticides from water accumulated toxins in the canal. However, people had more conservation awareness canal but there not know how.

### 8.3 The Development in Geographic Information System (GIS)

The Research and development in Geographic Information System application for support the environmental education activities of the community along Saen Saeb Canal. It consolidates data and survey data in the field. This project can be prepared in GIS data layers. Physical and economic – social, this is used to support environmental education of the community along Saen Saeb Canal as well. Development of GIS applications for use in data storage and other database-related activities, environmental education of the community along Saen Saeb canal. It is easier to access and manage GIS data in an efficient and sustainable. The researcher needs to assemble a database of various activities related to environmental education of the community along Saen Saeb canal. And the plans for development of GIS applications for environmental education activities of the community along Saen Saeb Canal in every stage.

## 9. CONCLUTION AND DISCUSSION

Today the social and economic environment had changee. Communities along the canal occurred. Urban society expanded from inside to outside. Metropolitan area buildings were concentrated along the canal. Residential and business information sources included the water transportation. Rapid changes made quality of water worse to any canal including Saen Saeb Canal. The rotten state affected to mind and emotions of the spectator and residents along canal. One of the reasons affected the pollution of the water in the canal was that human was not aware of the importance of water in the canal used in life. The water supply system was accessible in almost every household and people thought this was a drainage canal of sewage.. The solution to solve this problem is cooperate with any sectors. The strong sense of community to preserve is important but the wastewater from household and business along canal is incorrect and there are plenty. The legal can force to protect. However, each community is different context. So, the research and development in the future should be studied in each context community to find the guideline and model that is appropriate for each area in different dimension.

## 10. Copyright

## Acknowledgements

This paper support by continues research fund from Thailand Government Budget along 2010 – 2012 of Srinakharinwirot University and co-researcher team with Kasem Bundit University.

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